ENVIROTEST INC.

December 29, 1993

Ms. Barbara Pope
Southwestern Refining Company, Inc.
P.O. Box 9217
Corpus Christi, Texas 78469-9217

Dear Ms. Pope:

Enclosed is written confirmation of analytical results for the three air samples, numbers 93385, 93386, and 93387, received at our laboratory at 9:00 a.m. on Monday, December 20, 1993.

Calculations of f/cc are based solely on the volume supplied by Southwestern Refining Company. Envirotest Inc. assumes no responsibility for whether the supplied samples accurately represent the regulated area nor for any subsequent use or interpretations of the analytical results.

The air sample analyses were performed in our Houston laboratory by NIOSH 582-certified personnel with a Nikon Alphaphot microscope equipped with 400X magnification, Walton-Beckett graticule, and positive phase contrast. The NIOSH 7400 method was used. Envirotest, Inc. is licensed by the Texas Department of Health (#30-0005) for asbestos laboratory analysis.

This report and the findings contained herein shall not, in whole or in part, be altered, dispersed, or disclosed to any other party. It is provided for your sole use and may not be used or relied upon by any other party, in whole or in part, without prior written consent from Envirotest, Inc.

If you have any questions regarding the sample analyses, please call. We appreciate the opportunity to be of service to Southwestern Refining Company, Inc.

Sincerely,

Daniel J. Gerhardt, C.P.G.
President
Envirotest, Inc.

DJG/ajf

SWRf/Asbestos 1063

Envirotest, Inc. Laboratory Air Sample Analysis Report

SOUTHWESTERN REFINING COMPANY, INC.
ALKY INVESTIGATION

RECD: DECEMBER 20, 1993
ANALYZED BY : KENNETH SLOAN

SAMPLE #	FLOW L/M	TIME MIN.	VOLUME LITERS	NUMBER FIELDS	NUMBER FIBERS	BLANK COUNT	F/MM2	F/CC
AREA SAMPLES								
93385 AREA SAMPLE	.00	0	85.8	100	.0	.00	8.9	< .040
93386 FIELD BLANK	.00	0	.0	100	.0	.00	.0	.000
93387 AREA SAMPLE	.00	0	112.4	100	.0	.00	8.9	< .031

SWRf/Asbestos 1064

1B 004951

IH ANALYTICAL REQUEST

Client:

Southwestern Refining Company, Inc.
P. O. Box 9217
Corpus Christi, TX 78469

Case No:
Date Recd:
Shipment Method:
Del. agent:
Rec. agent:

Investigation: A/K4

Lab Number	Client Number	Sample Type	Air Volume	Test Required	Results/Det.Limits
	93385	25mm CEF	85.80	Asbestos	8.92 / .04
	93386		Blank		
	93387		112.35		8.92 / .031

Report Comments:

SWRf/Asbestos 1065

File Comments:

1B 004952

EMPLOYEE MONITORING NOTIFICATION KM-4772-B

ID NUMBER: 93385
DATE: 12-27-93

SUBSIDIARY/DIVISION: KMRC
FACILITY: Southwestern
EMPLOYEE NAME (LAST, FIRST): Wolfenbarger Roy
EMPLOYEE NUMBER: 453-23-1111
JOB TITLE: Firefighter
WORK LOCATION: Alice

NOISE SURVEY

EMPLOYEE'S ACTUAL 8 HOUR-TIME-WEIGHTED AVERAGE	TYPE/BRAND HEARING PROTECTION WORN
EMPLOYEE'S REPRESENTATIVE 8 HOUR-TIME WEIGHTED AVERAGE	
OSHA PERMISSIBLE EXPOSURE / OSHA ACTION LEVEL	EMPLOYEE ENROLLED IN HEARING CONSERVATION PROGRAM

SUBSTANCE SURVEY

SUBSTANCE	EMPLOYEE'S 8 ~~HOUR~~-TIME-WEIGHTED AVERAGE	OSHA 8 HOUR PERMISSIBLE EXPOSURE LIMIT	CEILING EXPOSURE LEVEL: EMPLOYEE	CEILING EXPOSURE LEVEL: OSHA/ACGIH	SHORT TERM EXPOSURE LEVEL: EMPLOYEE	SHORT TERM EXPOSURE LEVEL: OSHA/ACGIH	PERSONAL PROTECTIVE EQUIPMENT WORN: YES	PERSONAL PROTECTIVE EQUIPMENT WORN: NO	OSHA ACTION LEVEL
Asbestos	.040 f/cc	0.2 f/cc							0.1 f/cc

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATOR: half face
BODY: disposable coveralls
GLOVES: disposable
OTHER:

SURVEY PERFORMED BY: [illegible]
SURVEY DATE: 12-17-93
ENGINEERING CONTROL:

ACTION TAKEN: None needed at this time.

EMPLOYEE SIGNATURE: For Wolfenbarger
COMPANY REPRESENTATIVE SIGNATURE: [illegible]
DATE: 12-27-93

DISTRIBUTION: ORIGINAL - Employee
COPY - Facility File
COPY - Corporate Medical Services

1B 004953

Dept Insulation
Site Corpus Christi
Area Alky

KERR McGEE REFINING CORPORATION
INDUSTRIAL HYGIENE DATA FORM

Accession ____
File No. 93-0441
Site Use ____

ID	CAS Registry Code No.	K	Yr.	Mo.	Day	Sheet No.
		E	93	12	17	

S	T	D	Elapsed Time, Min	M/E	L/G	Concentration	U	P	Parameter Value	Prot Equip.	No Samp.
P	O	F					G				

X	Site Locator Codes	SSN
		453-23-1404

CODES

K—Monitoring Standard
A—8 Hour TWA
B—12 Hour TWA
C—Short Term TWA
D—Instantaneous Peak
E—Duration of Task
O—Other

S—Sample
A—General Area
B—Breathing Zone
C—Continuous
H—Blood (ZZ only)
O—Other
P—Personal
S—Source Sample
U—Urinalysis (ZZ only)

T—Type
F—Full Period Single
G—Series Grab
L—Full Pd. Consecutive
O—Other
P—Partial Period
S—Single Grab

D—Device
A—Adsorption Tube
B—Passive Dosimeter
D—Direct Instrument
F—Filter
G—Grab Sample
I—Impinger/Bubbler
O—Other
R—Filter, Respirable Dust
T—Detector Tube

U—Units
B—Parts/Billion
C—Fiber/cm
D—Decibels
J—µg/100 g(blood ZZ only)
K—µg/mL(urine ZZ only)
L—µg/mL(urine ZZ only)
M—Parts/Million
O—Other
P—Percent
U—g/m3
X—mg/m3

P—Statistic/Parameter
G—Geometric Mean and Geometric Std. Dev
L—50 Percentile and 95th Percentile
O—Other
X—Arithmetic Mean and Std. Deviation

Protective Equipment/Work
A—Air Supplied Respirator, Continuous Flow
B—Air Supplied Respirator, Demand
E—Cover All Goggles
F—Face Shield
G—Impervious Gloves
H—Air Supplied Respirator, Pressure Demand
I—Hearing Protection—Inserts
J—Impervious Suit—Not Air Supplied
M—Hearing Protection—Muffs
N—None Required
O—Other
P—Air Purifying Respirator, Full Face
Q—Air Purifying Respirator, Half Face
R—Air Purifying Respirator, quarter Face
S—Self-Contained Respirator, Pressure Demand
T—Self-Contained Respirator, Demand
U—Impervious Suit—Air Supplied
Y—Power Air Purifying Respirator
W—Disposable respirator—Dust

M—Measured Value
E—Estimated Value
L—Less Than
G—Greater Than

FOR SITE USE

Monitoring For: Asbestos fibers
(Common Chemical Name)

IN: ____ (Site Designation) Person Sampled Welford (Last Name) Ray (First Initial)

DATA/OBSERVATIONS

Protective Equipment Used ____

Humidity 87%

Sample No. 93385 Avg Temp. 70 Avg AtmPress. 30.04 Predominant Wind Direction SE Avg Speed 13

Sampler Pump Make MSA Model Flow Lite Ser. No. 7961 No. ____

Calibration Method ____ Reference ____ By Nancy Logue Date 12-17-93

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min.	Strokes	Vol/Min	Vol/Stroke	Uncorrected	Corrected
930	1030	60		1.43			85.78

1364 1496

Sampling Method ____ Reference ____ Precision ____ Accuracy ____

Make ____ Model ____ Adsorbent ____ Lot No. ____

Anal. Method ____ Reference ____ Precision ____ Accuracy ____

Anal. Equip ____ Manufacturer ____ Model ____ Ser. No ____

Analytical				Results		
No	Reference	Analyst	Analyte	Mass/No Particles	Concentration	Units
					<0.040	f/cc

CALCULATIONS: (Additional data, remarks, etc.)

Pump Calibration X = 60 sec x # ml / # sec

N.E. Corner by Flare K.O. Drum

SWRf/Asbestos 1067

• Please Retain Pink Copy for Your Records
Please Do Not Pull Form Set Apart

Investigator (Signature) B. Lone Date 12-17-93

Received by (Signature) ____ Date/Time ____

Completed by (Signature) ____ Date/Time ____

4 Bags 1
Amount removed 3' of 2x1½ pipe cover

1B 004955

Dept Insulation
Site Corpus Christi
Area A/IKy

KERR McGEE REFINING CORPORATION
INDUSTRIAL HYGIENE DATA FORM

Accession
File No. 93-0441
Site Use

ID	CAS Registry/Code No.	K	Yr.	Mo.	Day	Sheet No.
		5	93	12	17	
1 2 3	11 12 13 14	15 16	17 18	19	24	

S	T	D	Elapsed Time, Min	M/E	L/G	Concentration	U	P	Parameter Value	Prot Equip.	No Samp.
A	O	F					C				
25	26	27	28 30	31	32	33 37	38	39	40 44	45 46	47 49

X	Site Locator Codes	SSN
50	51 55 60 65 70	71 75 80

CODES

K—Monitoring Standard
A—8 Hour TWA
B—12 Hour TWA
C—Short Term TWA
D—Instantaneous Peak
E—Duration of Task
O—Other

S—Sample
A—General Area
B—Breathing Zone
C—Continuous
H—Blood (Z2 only)
O—Other
P—Personal
S—Source Sample
U—Urinalysis (Z2 only)

T—Type
F—Full Period Single
G—Series Grab
L—Full Pd. Consecutive
O—Other
P—Partial Period
S—Single Grab

D—Device
A—Adsorption Tube
B—Passive Dosimeter
D—Direct Instrument
F—Filter
G—Grab Sample
I—Impinger/Bubbler
O—Other
R—Filter, Respirable Dust
T—Detector Tube

U—Units
B—Parts/Billion
C—Fiber/cm
D—Decibels
J—µg/100 g(blood Z2 only)
K—µg/mL(urine Z2 only)
L—µg/mL(urine Z2 only)
M—Parts/Million
O—Other
P—Percent
U-g/m3
X—mg/m3

P—Statistical Parameter
G—Geometric Mean and Geometric Std. Dev
L—50 Percentile and 95th Percentile
O—Other
X—Arithmetic Mean and Std. Deviation

Protective Equipment Worn
A—Air Supplied Respirator, Continuous Flow
B—Air Supplied Respirator, Demand
E—Cover All Goggles
F—Face Shield
G—Impervious Gloves
H—Air Supplied Respirator, Pressure Demand
I—Hearing Protection—Inserts
J—Impervious Suit—Not Air Supplied
M—Hearing Protection—Muffs
N—None Required
O—Other
P—Air Purifying Respirator, Full Face
Q—Air Purifying Respirator, Half Face
R—Air Purifying Respirator, quarter Face
S—Self-Contained Respirator, Pressure Demand
T—Self-Contained Respirator, Demand
U—Impervious Suit—Air Supplied
Y—Power Air Purifying Respirator
W—Disposable Respirator—Dust

M—Measured Value
E—Estimated Value
L—Less Than
G—Greater Than

FOR SITE USE

Monitoring For: Asbestos

IN: _____ (Site Designation) Person Sampled Blank (Last Name First Initial) (Common Chemical Name)

DATA/OBSERVATIONS

Protective Equipment Used _____

Sample No. 93386 Avg Temp. _____ Avg AtmPress. _____ Predominant WindDirection _____ Avg Speed _____

Sampler PumpMake MSA Model Flow Lit Ser.No. 7967 No. _____

CalibrationMethod _____ Reference _____ By Nancy Logue Date _____

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min.	Strokes	Vol/Min	Vol/Stroke	Uncorrected	Corrected

SamplingMethod _____ Reference _____ Precision _____ Accuracy _____

Make _____ Model _____ Adsorbent _____ Lot No. _____

Anal. Method _____ Reference _____ Precision _____ Accuracy _____

Anal. Equip _____ Manufacturer _____ Model _____ Ser.No. _____

Analytical				Results		
No	Reference	Analyst	Analyte	Mass/No Particles	Concentration	Units
					0.000	f/cc

CALCULATIONS: (Additional data, remarks, etc.)

Pump Calibration X = 60 sec x # ml / # sec

• Please Retain Pink Copy for Your Records
Please Do Not Pull Form Set Apart

Investigator (Signature) B. Pan Date 12-17-93

Received by (Signature) _____ Date/Time _____

Completed by (Signature) _____ Date/Time _____

1B 004956

Dept Insulation
Site Corpus Christi
Area #1KV

KERR McGEE REFINING CORPORATION
INDUSTRIAL HYGIENE DATA FORM

Accession
File No. 93-0441
SiteUse

ID	CAS Registry/Code No.	K	Yr.	Mo.	Day	Sheet No.
		E	93	12	17	
1 2 3	11 12 13 14	15	16	17	18 19	24

S	T	D	Elapsed Time, Min	M/E	L/G	Concentration	U	P	Parameter Value	Prot Equip.	No Samp.
A	0	F					C				
25	26	27	28 30	31	32	33 37	38	39	40 44	45 46	47 49

X	Site Locator Codes	SSN
50	51 55 60 65 70	71 75 80

CODES

K—Monitoring Standard
A—8 Hour TWA
B—12 Hour TWA
C—Short Term TWA
D—Instantaneous Peak
E—Duration of Task
O—Other

S—Sample
A—General Area
B—Breathing Zone
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H—Blood (Z2 only)
O—Other
P—Personal
S—Source Sample
U—Urinalysis (Z2 only)

T—Type
F—Full Period Single
G—Series Grab
L—Full Pd. Consecutive
O—Other
P—Partial Period
S—Single Grab

D—Device
A—Adsorption Tube
B—Passive Dosimeter
D—Direct Instrument
F—Filter
G—Grab Sample
I—Impinger/Bubbler
O—Other
R—Filter, Respirable Dust
T—Detector Tube

U—Units
B—Parts/Billion
C—Fibers/cm
D—Decibels
J—µg/100 g(blood Z2 only)
K—µg/mL(urine Z2 only)
L—µg/mL(urine Z2 only)
M—Parts/Million
O—Other
P—Percent
U-g/m3
X—mg/m3

P—StatisticalParameter
G—Geometric Mean and Geometric Std. Dev
L—50Percentile and 95th Percentile
O—Other
X—Arithmetic Mean and Std. Deviation

ProtectiveEquipment/Work
A—Air Supplied Respirator, Continuous Flow
B—Air Supplied Respirator, Demand
E—Cover All Goggles
F—Face Shield
G—Impervious Gloves
H—Air Supplied Respirator, Pressure Demand
I—Hearing Protection—Inserts
J—Impervious Suit—Not Air Supplied
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O—Other
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Q—Air Purifying Respirator, Half Face
R—Air Purifying Respirator, quarter Face
S—Self-Contained Respirator, Pressure Demand
T—Self-Contained Respirator, Demand
U—Impervious Suit—Air Supplied
Y—Power Air Purifying Respirator
W—Disposable respirator—Dust

M—Measured Value
E—Estimated Value
L—Less Than
G—Greater Than

FOR SITE USE

Monitoring For: Asbestos
(Common Chemical Name)

IN: _____ Person Sampled Area
(Site Designation) (Last Name First Initial)

DATA/OBSERVATIONS

Protective Equipment Used _____

Humidity 87%

Sample No. 93387 Avg Temp. 70 Avg AtmPress. 30.04 Predominant WindDirection SE Avg Speed 13

Sampler PumpMake MSA Model Flow Lite Ser.No. 8027 No. _____

CalibrationMethod _____ Reference _____ By Nancy Logue Date 12/17/93

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min.	Strokes	Vol/Min	Vol/Stroke	Uncorrected	Corrected
930	1030	60		1.872			112.35

SamplingMethod _____ Reference 1541 Precision 2204 Accuracy _____

Make _____ Model _____ Adsorbent _____ Lot No. _____

Anal. Method _____ Reference _____ Precision _____ Accuracy _____

Anal. Equip _____ Manufacturer _____ Model _____ Ser.No. _____

Analytical				Results		
No	Reference	Analyst	Analyte	Mass/No Particles	Concentration	Units
					<0.031	f/cc

CALCULATIONS: (Additional data, remarks, etc.)

Pump Calibration X = 60 sec x # ml
sec

N.W. side of flare K.O. Drum

- Please Retain Pink Copy for Your Records
Please Do Not Pull Form Set Apart

Investigator (Signature) B Fox Date 12-17-93

Received by (Signature) _____ Date/Time _____

Completed by (Signature) _____ Date/Time _____